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NMFS Marine Mammal Health and Stranding Response Program at 30: Statutory mandates and future directions in a changing climate

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MMPA Title IV

- Marine Mammal Health & Stranding Response Program (MMHSRP)
- Established by Congress in 1992 under Title IV of the Marine Mammal Protection Act
- Explicit health mandate (rare w/in NMFS)
- Triggered by 3 events
 - Multiple humpback whale mortalities 1987 (biotoxin)
 - Bottlenose dolphin die-off 1987-88 (infectious disease as COD + contaminants)
 - Exxon Valdez oil spill 1989



Statutory Purposes of the MMHSRP

1. Facilitate the collection & dissemination of reference data on the health of marine mammals & health trends of marine mammal populations in the wild;
2. Correlate the health of marine mammals with available data on physical, chemical, & biological environmental parameters; and
3. Conduct effective responses to marine mammal Unusual Mortality Events



Implementation of the MMHSRP over 30 years

Focus on 4 primary areas:

1. Coordinate stranding and entanglement response networks, including management of data collected
2. Leading Unusual Mortality Event responses and investigations
3. Conducting and supporting biosurveillance and baseline health research
4. Supporting networks through the administration of the Prescott Grant Program (2000)



Investigation of Human Interactions

- Standardized forms for collecting information from strandings
- Process for documentation and analysis of recovered gear from entangled animals
- Findings provide basis and support for Office of Law Enforcement Investigations, Take Reduction Teams, NMFS Management efforts

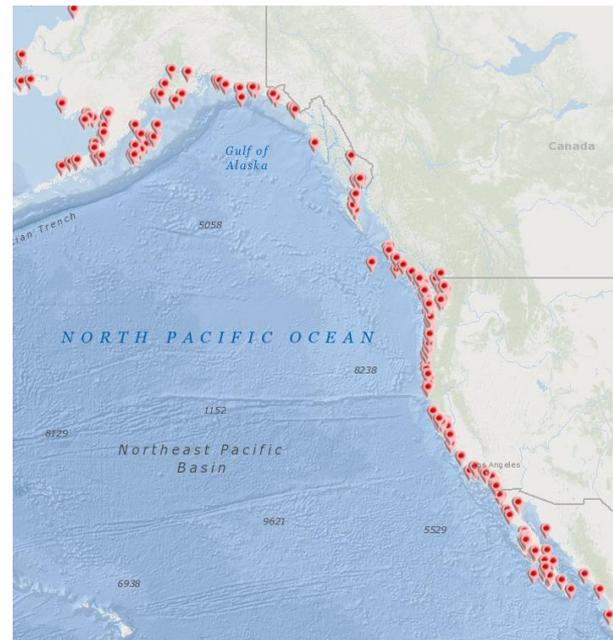


Newest Changes: Marine Mammal Research & Response Act (MMRRA)

Enacted Dec 2022 as part of National Defense Authorization Act of 2022

Amends Title IV:

- Creation of HealthMAP - online database to store additional information on health, visualize information on IOOS
- Requires stranding network to submit additional health information to HealthMAP
- Amendments to Prescott, creation of Geraci Rapid Response Fund



MMRRA will ...

Create an expanded standardized database

Lead to enhanced data accessibility:

- Supplemental data on stranding event
- Laboratory analysis results, including virology, bacteriology, parasites, etc.

Result in:

- Better understanding of causes of stranding
- Identification of additional threats beyond human interaction & underlying stressors

Costs (time, effort, data entry, analyses)



Foundational data

- Stranding and Entanglement Response Networks provide nationwide monitoring and response
- MMHSRP also conducts and supports baseline health research
- Contributes to best available science for:
 - Take Reduction Teams, Serious Injury determinations, Stock Assessment Reports
 - Recovery planning
 - Biological Opinions & Permitting
 - Natural Resource Damage Assessment
 - Scientific community at large

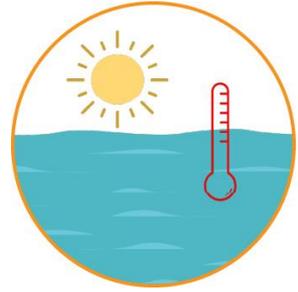


Resources leveraged across partnerships

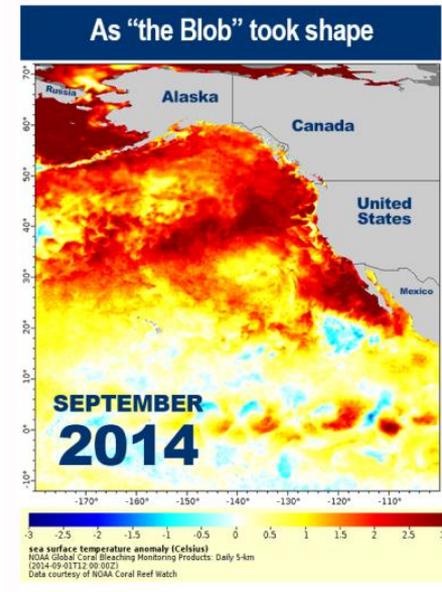
- Some Federal support through Prescott Grant Program, but much privately funded
- Successful partnerships include:
 - Stranding and entanglement network members
 - NIST (National Marine Mammal Tissue Bank)
 - National Wildlife Health Center (histopathology & diagnostics)
 - Permit collaborators (e.g., academia, NGOs)



Future directions in light of Climate Change



- Marine mammals are sentinels
- Some observable changes:
 - Differences in distributions/species range
 - Habitat utilization, prey composition
 - Human threats - entanglements, vessel strikes
 - Pathogen changes - viruses, bacteria
 - Severe weather events - hurricanes, wildfires, extreme storms
 - Toxins - harmful algal blooms, domoic acid





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Thank You

